



UTM

Unidad de Tecnología Marina

Benefits of
chartering RV's for the offshore industry. Scientific
Charter Experiences with
BO Sarmiento de Gamboa

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Chartering Experiences *BO Sarmiento de Gamboa*

- **Large Scale Marine Facilities**
 - Characteristics*
 - Support Facilities*
- **Industry Collaboration Scenarios**
- **Incidence Industry Sectors**
- **Market & Opportunities**
 - Contacts- Contracts with Industry*
- **Industry Requirement's**

The CSIC-UTM operates three RV'S (Global, Oceanic and Regional) under competitive national call.

- 1. RV Hespérides (Global)*
- 2. RV Sarmiento de Gamboa (Oceanic)*
- 3. RV Garcia del Cid (Regional)*

Being two of them Large Scale Scientific Technology Facilities (ICTS), which have special national treatment for funding.



Land Facilities: Vigo (Porriño warehouse)



VIGO



BARCELONA

CARTAGENA

At 20 km from Vigo, inland, warehouse for holding and maintenance of heavy equipment:

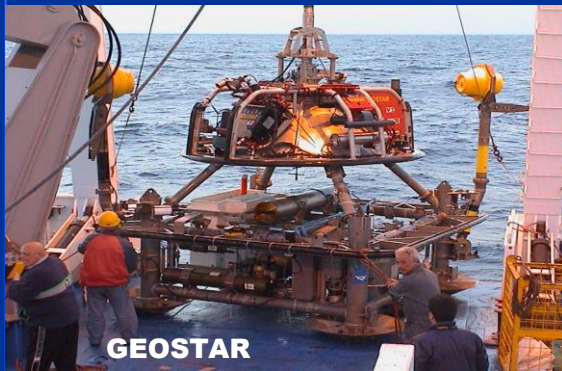
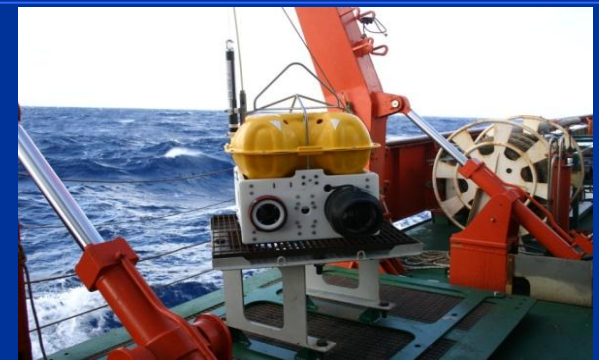
- 6 Lab-containers (van)
- Winches and trawl winches
- Streamers, compressors...

Scenarios Public-Private Sector Collaboration



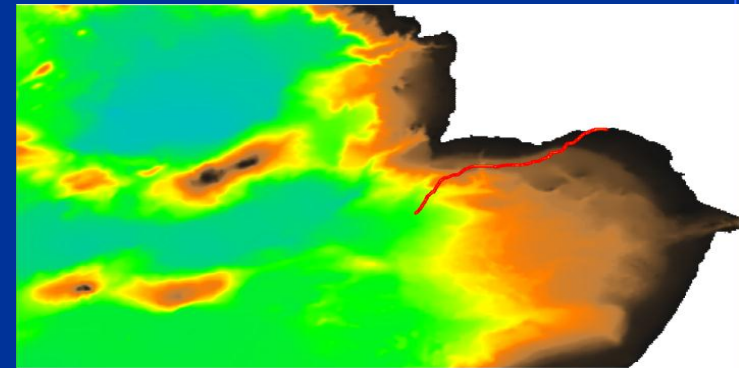
Seismic Scenario

- 6,000 m streamer 480 channels
- Portable seismic structure for gun arrays
- 2 compressors (25 m³/min), one on back-deck, other engine room
- 2 air gun strings with capacity 6000 cu. In.
- National 18 OBS Pool



Engineering Scenario.

- Multibeam Echosounder deep & shallow waters
- Parametric sounding
- USBL
- Dynamic Position
- ROV, AUV, Vehicles capacity



Environmental Scenario

- CTD Rosette
- Piston Coring
- Hydrography, Mapping
- High Crane capacity



Industrial & Civil incidence Sectors

Natural resources; Oil, Gas, Deep Sea mining, etc.

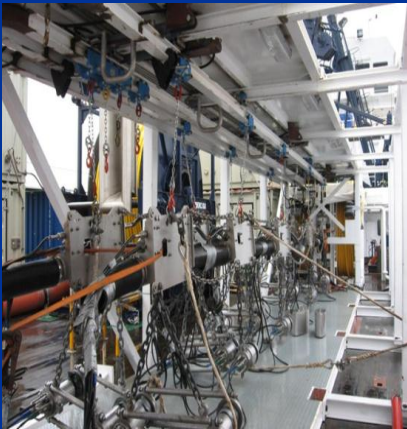
Environment; Civil protection, Marine mammals protection, Biodiversity

Marine Technology; Sensor, vehicles, Seafloor Observatories, seismic tools

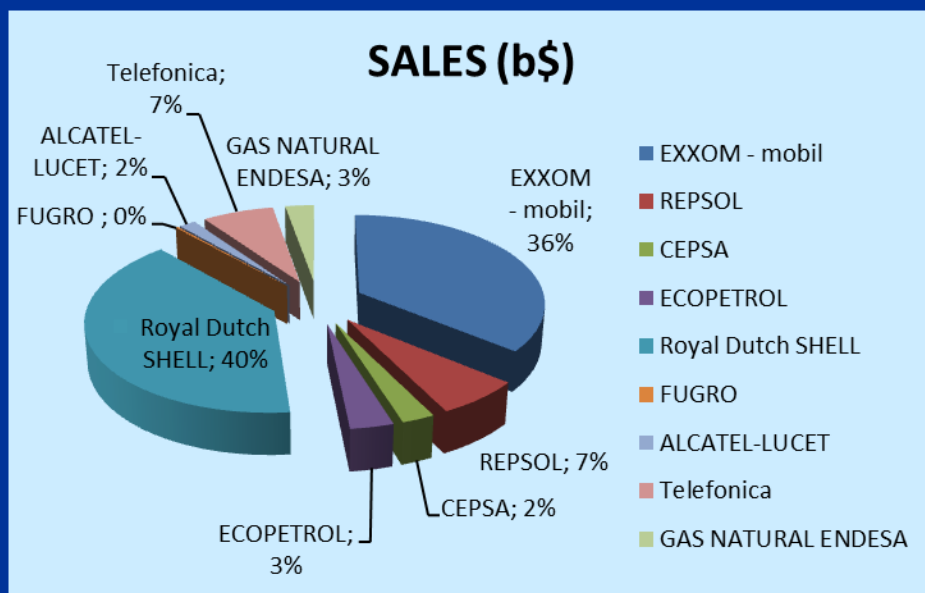
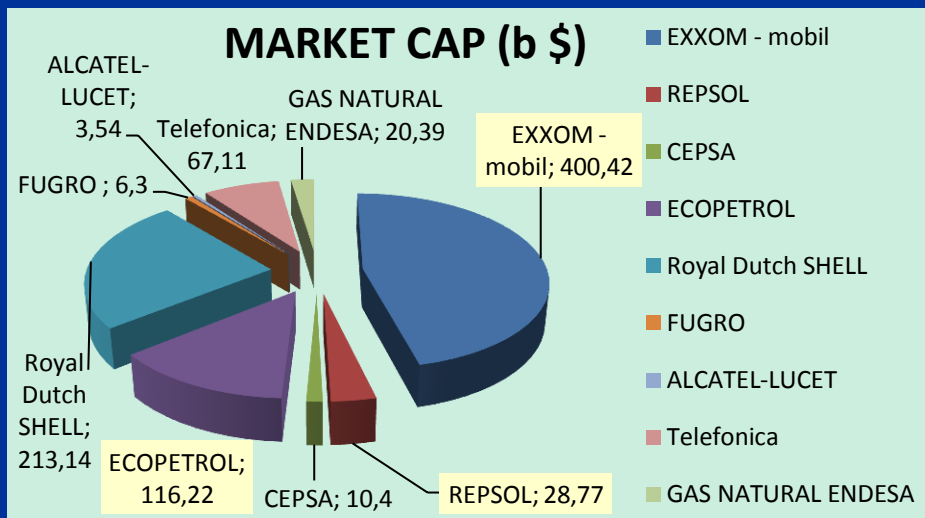
Energy; Submarine cabling, wind farming, wave energy, etc.

Shipping Cia; Shipyards, ship design, green ships

Management; Services, HSE Control, Training, etc.



Market / Opportunities



COMPANY	SALES (b\$)	MARKET CAP (b \$)
EXXOM - mobil	420,71	400,42
REPSOL	77,74	28,77
CEPSA	29,56	10,4
ECOPETROL	38,97	116,22
Royal Dutch SHELL	467,15	213,14
FUGRO	3,02	6,3
ALCATEL-LUCET	19,06	3,54
Telefónica	82,26	67,11
GAS NATURAL ENDESA	32,86	20,39

Source: Forbes List, May 2013

High standards, industry requirements

VESSEL AUDIT REQUERIMENTS

- ❑ **OVID** (*Offshore Vessel Inspection Database*)
- **OVPQ** (*Offshore Vessel Particular Questionnaire*)
- **OVIQ** (*Offshore Vessel Inspection Questionnaire*)
- **OVMSA** (*Offshore Vessel Management Self Assessment*)

Step 1-

Registration of your Company and the vessel R/V Sarmiento de Gamboa in Oil Companies International Marine Forum's (OCIMF) Offshore Vessel Inspection Database (OVID)

The OVPQ Sections are as follows:

1. General Information
2. Certification and Documentation
3. Crew and Contractor Management
4. Navigation
5. Safety and Security Management
6. Pollution Prevention and Environmental Management
7. Structural
8. Specialty Vessel/Unit Data
9. Deck Equipment
10. Communications
11. Propulsion, Power Generation and Machinery
12. Ice Operational Capability
13. Helicopter Operations
14. DP Capability and Systems
15. Lift Boats / Jack-ups

The OVMSA are as follows:

1. Management, Leadership and Accountability
2. Recruitment and Management of Shore-based personnel
3. Recruitment and Management of Vessel personnel
4. Reliability and Maintenance Standards
5. Navigational Safety
6. Offshore Operations
7. Management of Change
8. Incident Investigation and Analysis
9. Safety Management (Shore and Fleet Monitoring)
10. Environmental Management
11. Emergency Preparedness and Contingency Planning
12. Measurement, Analysis and Improvement

HSE Policy (primarily requirements)

- **Planning and field management of Injury & Illness (I&I)**

- Provide guidance to ensure that prompt, adequate, and appropriate medical care is provided for work-related injuries and illnesses (I&I) in order to minimize the impact to employees.

- **Drug & Alcohol (D&A) Compliance**

- Contractor must incorporate requirements into their A&D requirements
- All workers must sign an acknowledgment that they have been informed, understand and will comply with Customer and Contractor A&D requirements
- Workers must notify supervisors of OTC or prescription medications that may mentally or physically impair their work

- **Pre-Access & Annual:**

- Contractors in Comparable to Designated (CTD) & Safety Sensitive (SS) Positions must have passed a valid A&D test within the prior 12 months before beginning work for customer.
- Contractors working continuously for customer in CTD & SS positions must have an annual A&D test

- **Random Testing:**

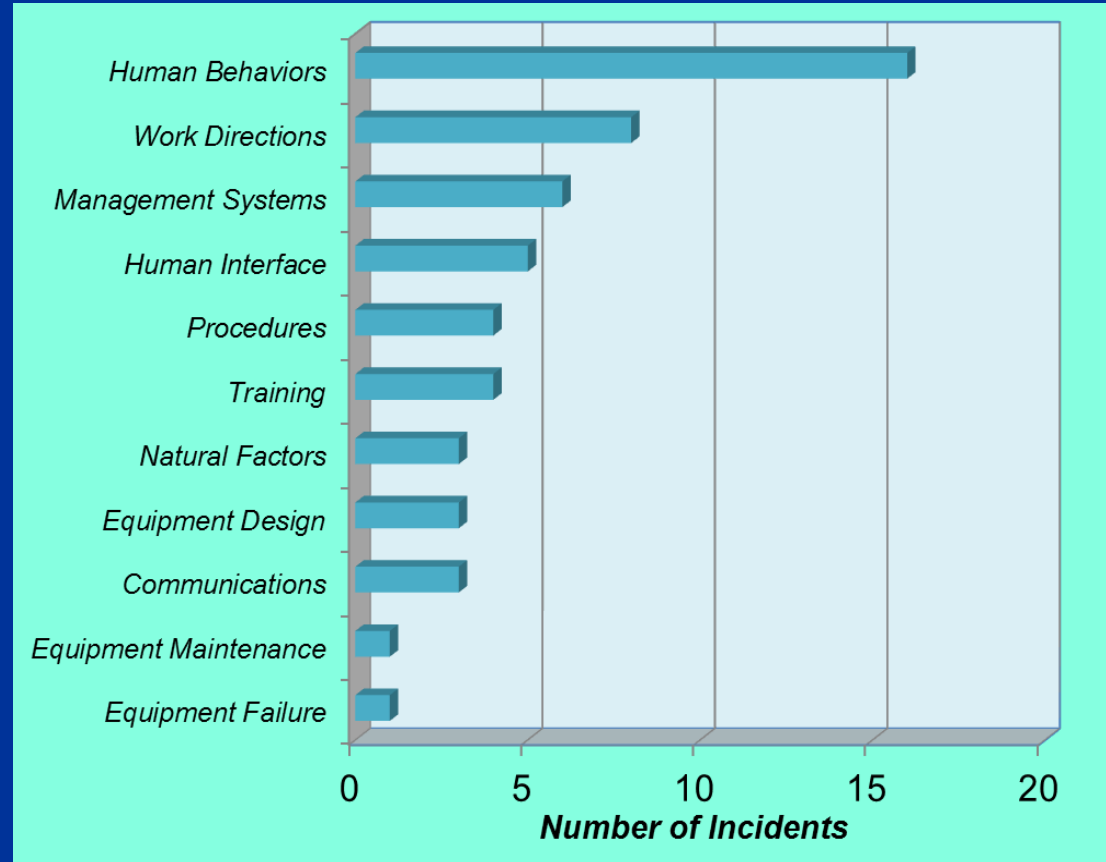
- All Comparable to Designated (CTD) personnel identified will be continuously subject to random A&D testing
- Minimum rate of testing of CTD pool is 50% annually
- Pro-rate number of tests needed for short term jobs

- **Environment (MMP)**

Global Incident Trends – Worldwide Geophysical Operations

- **Incident analysis had several common themes**
 - Failure to follow procedures
 - Failure to recognize the hazard / lack of situational awareness
 - Inadequate use of Last Minute Risk Assessments
- **Root causes identified highlight potential areas for improvement:**
 - Personal safety awareness
 - Behavioral based safety awareness
- **Continuous focus on PPE**
 - Improving technology (i.e. gloves, glasses)
 - Constant usage

2010 – 2011 Root Cause Analysis



MANAGEMENT OF CHANGE MOC, Changes

What is a Change?

- ***An alteration, modification, addition or revision from the project plan that could have a Safety, Health, Environment and/or Security impact on operations***

Types of Change:

Operational: e.g., continuing of operations without a piece of critical equipment such as a back-up generator

Equipment: e.g., changing the type of drill (rotary vs. air)

Procedures: e.g., modifying an integrity critical procedure such as close pass (e.g. closest approach to a platform)

Field Personnel: e.g., replacing an integrity critical position such as a vessel officer, Party Manager, SHE&S advisor, etc.

MARINE MAMMALS PROTECTION (MMP)

- **EIA Previous Report**
- *No injury to marine life*
 - Conduct survey taking guidance from **JNCC** guidelines for marine mammals / protected species
 - Pre-watch observation period (30 min for WD < 200 m)
 - Soft Start – 20 minutes
 - If line turns are shorter than 40 min, no need to
 - 3 MMOs onboard
 - PAM use during night start mandatory
 - PAM use during the day is required by client



SWOT Analysis

Strengths:

- Qualified technical personnel
- Experienced and qualified crew
- Marine Infrastructure
- Industry Standards

Weaknesses:

- Rigid hiring System
- Management (administration)
- Reduce personnel



Opportunities

- Industry (market) interested
- Demand industry: 2-D Seismic, Environment, "Deep Sea floor", etc.
- Services, knowledge

Threats

- HHRR: Crew & Technicians
- Infrastructure: Maintenance & Development
- Administration: low flexibility

BENEFITS FOR NATIONAL RESEARCH VESSELS

Use the spare time of the RV's

Maintain high level training for the crew members

Keep and maintain large scale infrastructure's

Reach High Industry Standards

Help National Research Programs in difficult times



***BO Sarmiento de Gamboa
accomplish the high industry
standards to link through
research contracts in marine
industry business***

Thanks very much for your attention